

Amendments to the Claims:

Please cancel claims 2-18, 20, 22-24, 26-33, 35-37, 39, 40, 43, 45, 47, 48, 51-102, 104-108, 111-113 and 115 without prejudice. Please amend claims 21, 25, 46, 109, and 114 as follows. This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A method of isolating cells expressing an RNA comprising the steps of:
 - providing cells potentially expressing an RNA;
 - exposing the cells to a signaling probe that produces a detectable signal upon hybridization with said RNA; and
 - isolating the cells that produce the signal.
- 2 - 18. (Canceled)
19. (Original) A method of isolating a plurality of cells, wherein a subset of the cells express an RNA that is not expressed by another subset of the cells, comprising the steps of:
 - introducing into cells a plurality of DNA that results in the expression of a plurality of endogenous RNA, wherein at least a subset of the plurality of endogenous RNA are different from each other;
 - exposing the cells to a plurality of different signaling probes, wherein the signaling probes produce a detectable signal upon hybridization to one or more RNAs of the plurality of endogenous RNA; and
 - isolating the cells that produce the signal.
20. (Canceled)

21. (Currently Amended) The method of claim 19 ~~any one of claims 18-20~~, wherein the plurality of RNA form an expression library.

22 – 24. (Canceled)

25. (Currently Amended) The method of ~~any one of claims 1-24~~ claim 1 or 19, further comprising the step of culturing the isolated cells.

26 – 33. (Canceled)

34. (Original) A method of isolating cells with reduced expression of a protein comprising the steps of:

introducing into cells a DNA encoding an antisense RNA or an shRNA that reduces expression of said protein;

exposing the cells to a signaling probe that produces a detectable signal upon hybridization to said antisense RNA or shRNA; and

isolating the cells that produce the signal.

35 – 37. (Canceled)

38. (Original) A method of identifying a compound that activates a conditional promoter, comprising the steps of:

adding a test compound to the cells isolated by the method of claim 16;

assaying for the presence of the second RNA under the control of the conditional promoter; and

identifying the test compound as a compound that activates the tissue specific promoter if the cell expresses the second RNA.

39 – 40. (Canceled)

41. (Original) A method of identifying a compound that modulates expression of an RNA, comprising the steps of:

adding a test compound to cells expressing said RNA;

exposing the cells to a signaling probe that produces a detectable signal upon hybridization with said RNA;

comparing the signal produced by cells exposed to the test compound to the signal produced by cells not exposed to the test compound;

wherein an increase or decrease in signal produced by the cells exposed to the test compound as compared to the signal produced by the cells not exposed to the test compound indicates that the compound is a compound that modulates expression of said RNA.

42. (Original) The method of claim 41, wherein the RNA is encoded by a DNA that is introduced into the cells.

43. (Canceled)

44. (Original) A method for identifying a genetic recombinational event in living cells comprising the step of:

exposing a cell to a signaling probe that produces a detectable signal upon hybridization with an RNA transcribed from a recombined sequence,

wherein detection of a cell producing the signal indicates that the cell comprises the genetic recombinatorial event.

45. (Canceled)

46. (Currently Amended) A cell obtained by the method of ~~any one of claims 1-24, 34, or 45~~ claim 1 or 19.

47 – 48. (Canceled)

49. (Original) The cell of claim 46, wherein the cell is an embryonic stem cell.

50. (Original) A method for generating a transgenic or chimeric animal comprising the step of using the embryonic stem cell of claim 49 to produce said transgenic or chimeric animal.

51 – 102. Canceled.

103. (Original) A library of mammalian cell lines comprising at least 1,000 cell lines each comprising a stably integrated expressed sequence.

104 – 108. Canceled.

109. (Currently Amended) The library of ~~any one of claims 103-108~~ claim 103, wherein each cell line comprises a variable library sequence.

110. (Original) The library of claim 109, wherein the variable sequence of said expression library is selected from the group consisting of genomic, genomic untranslated, genomic translated, gene, cDNA, EST, oligo, random, RNA, protein, protein domain, peptide, intronic, exonic, tag, or linker sequence, or combination thereof or recombination thereof, or one or more of the unmodified, mutagenized, randomized, shuffled or recombined sequences.

111 – 113. Canceled.

114. (Currently Amended) The library of ~~any one of claims 103-108~~ claim 103, wherein the library is used in a cell-based screening assay.

115. (Canceled).

116. (Original) A method of identifying a compound that mediates or improves the introduction of signaling probes into cells comprising the steps of:

 exposing cells to a signaling probe in the presence of a test compound, wherein the cells comprise a target sequence and wherein the signaling probe produces a signal upon hybridization with the target sequence; and

 detecting the signal produced by the cells,

wherein an increase in signal produced by the cells exposed to the test compound as compared to cells not exposed to the test compound indicates that the test compound is a compound that mediates or improves the introduction of signaling probes into cells.